

**REMARKS/ARGUMENTS**

Claims 1-18, 21, 23-48 are pending. Claims 1, 16, 21, 35, 43, and 45 have been amended. Support for these amendments can be seen on page 11, lines 10-18 of the originally application. No new matter has been added.

As an initial matter, Applicants note that an Information Disclosure statement is being filed together with this Preliminary Amendment.

**Rejections under 35 U.S.C. § 102**

Claims 1-7, 9-13, 16-18, 21, 24-27, 29-32, 34-45, and 47 have been rejected under 35 U.S.C. §102(e) as being allegedly anticipated by U.S. Patent No. 6,179,835 to Panescu. Claims 1, 13, 14, and 48 have been rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,057,106 to Kasevich et al. Such rejections are traversed as follows.

Independent claim 1 is directed to a working end of an electrosurgical probe for delivering energy to tissue. Claim 1, as amended, recites a solid variable electrical resistive body. The body provides low resistance electrical current paths from an interior conductor portion of the body when the body is at a first temperature, and the body displays increased resistance electrical current paths when the body is at a selected higher temperature. The low resistance electrical current paths allow the interior conducting portion to cause ohmic heating of the tissue.

The use of a solid variable electrical resistive body, as recited in claim 1, has not been shown nor suggested in the cited art. A single cited art reference must teach each and every element of the claim to establish anticipation under 35 U.S.C. §102. M.P.E.P. §2131. The Panescu reference discloses an expandable electrode structure for diagnosis and treatment of cardiac conditions. Col. 1, lines 12-16. The Panescu device uses an inflation medium, such as water, saline, or air to expand the electrode structure. Col. 9, lines 38-49. The Office Action states that because the conductivity of saline is reduced upon vaporizing and freezing, it is a "variable resistive body." Office Action dated July 3, 2003, page 2. Although the resistance of

saline may change when undergoing a phase change, it is not a solid variable electrical resistive body that is capable of varying resistance within operational temperature ranges. Furthermore, Panescu is void of any discussion or suggestion of varying the resistance of the structure for treatment of tissue.

Claim 1 was also rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Kasevich et al. Kasevich et al. discloses a fluid expansion-type microwave or RF catheter system for heating arterial plaque. Col. 1, line 66 to col. 2 line 15. Like Panescu, the Kasevich et al. reference fails to disclose a solid variable electrical resistive body, and is void of any discussion or suggestion of varying the resistance of the structure for treatment of tissue.

U.S. Patent No. 5,716,366, issued to Yates and cited in the accompanying Information Disclosure Statement, discloses a hemostatic surgical instrument having a positive temperature coefficient (PTC) material that has an electrical impedance that increases with an increase in temperature. Col. 3, lines 50-64. However, because Yates discloses use of the PTC material as a "heating element," the PTC material must generally have a high resistance and therefore does not disclose low resistance electrical current paths as recited by claim 1. Furthermore, the PTC material disclosed in Yates is used to heat tissue, rather than using separate opposing polarity conductor portions to cause ohmic heating of the tissue, as recited in claim 1.

For the foregoing reasons, the cited references fail to teach all the recited elements of claim 1 and rejection of claim 1 (and dependent claims 2-15) under 35 U.S.C. §102(e) is not appropriate. Applicants therefore respectfully request withdrawal of this rejection and allowance of claims 1-15.

Independent claim 16, is directed to a method for controlled application of energy to a targeted tissue. Claim 16, as currently amended, recites the step of providing a probe with a working end having a solid variable electrical resistive body. In particular, the probe has at least one interior conductor coupled to a voltage source, and the body provides low resistance electrical current paths at a first temperature. Claim 16 further recites delivering RF energy to or from said at least one interior conductor thereby causing ohmic heating in said tissue. For many of the reasons set forth above for claim 1, the cited references fail to teach or suggest all the

limitations of claim 16. Hence, Applicants respectfully requests that rejections to claim 16 (and dependent claims 17-18) be removed, and that claims 16-18 be allowed.

Independent claim 21 is directed to a surgical probe for delivering energy to tissue. Claim 21, as amended, recites a body comprising an electrically non-conductive, solid material doped with an electrically conductive doping composition distributed therein to provide variable resistance. The body provides low resistance electrical current paths at a first temperature, and an interior electrode wherein the low resistance electrical current paths allow the interior electrode portion to cause ohmic heating of the tissue. For many of the reasons set forth above for claim 1, the cited references fail to teach or suggest all the limitations of claim 21. Therefore, Applicants respectfully requests that rejections to claim 21 (and dependent claims 23-34) be removed, and that claims 21, and 23-34 be allowed.

Independent claim 35, as currently amended, is directed to a surgical probe for delivering energy to tissue comprising a working end body with a solid material having resistance to electrical flow therethrough that varies substantially with pressure applied thereto. Claim 35 also recites an electrical conductor causing ohmic heating of the tissue. For many of the reasons set forth above for claim 1, the cited references fail to teach or suggest all the limitations of claim 35. Additionally, none of the cited references disclose a solid body that varies its resistance application of pressure. Therefore, Applicants respectfully requests that rejections to claim 35 (and dependent claims 36-42) be removed, and that claims 35-42 be allowed.

Independent claim 43, as currently amended, is directed to a surgical probe for delivering energy to tissue comprising a first body portion having a solid PTC material and a second body portion having a resistive heating element for causing heating of tissue. For many of the reasons set forth above for claim 1, the cited references fail to teach or suggest all the limitations of claim 43. Therefore, Applicants respectfully requests that rejections to claim 43 (and dependent claim 44) be removed, and that claims 43-44 be allowed.

Currently amended independent claim 45, is also directed to a surgical probe for delivering energy to tissue comprising a solid variable electrical resistance resistive body. For many of the reasons set forth above for claim 1, the cited references fail to teach or suggest all

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the limitations of claim 45. Therefore, Applicants respectfully requests that rejections to claim 45 (and dependent claim 46) be removed, and that claims 45-46 be allowed.

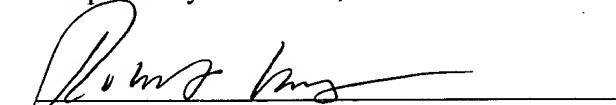
Independent claim 47, is directed to a method for controlled application of energy to a targeted tissue. Claim 47, as currently amended, recites the step of providing a probe with a working end having a resilient surface layer of a variable electrical resistive body. In particular, the probe has at least one interior conductor coupled to a voltage source, and the body provides low resistance electrical current paths at a first temperature. Claim 16 further recites delivering RF energy to said at least one interior conductor thereby causing ohmic heating in said tissue. For many of the reasons set forth above for claim 1, the cited references fail to teach or suggest all the limitations of claim 47. Therefore, Applicants respectfully requests that rejections to claim 47 (and dependent claim 48) be removed, and that claims 47-48 be allowed.

**CONCLUSION**

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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Robert F. Kramer  
Reg. No. 51,242

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 650-326-2400 / Fax: 415-576-0300  
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